

APR 05 2007

Docket No.: 1315-051

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Byoung Kee KIM

U.S. Patent Application No. 7,153,340

Date: December 26, 2006

: ATTN: Certificate of Correction Branch

: Group Art Unit: 1742

: Allowed: December 26, 2006

: Examiner: NGOCLAN THI MAI

For: PROCESS FOR MANUFACTURING NANO PHASE TAC-TRANSITION METAL
BASED COMPLEX POWDER

REQUEST FOR CERTIFICATE OF CORRECTION

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313

Sir:

It is respectfully requested that a Certificate of Correction be issued in order to correct errors
specified in the attached PTO Form SB/44.

A credit card authorization form in the amount of \$100.00 is enclosed.

Respectfully submitted,

LOWE HAUPTMAN & BERNER, LLP


Allan M. Lowe

Registration No. 19,641

USPTO Customer No. 22429

1700 Diagonal Road, Suite 300

Alexandria, Virginia 22314

(703) 684-1111

(703) 518-5499 Facsimile

Date: April 5, 2007

AML/mps

CERTIFICATION OF FACSIMILE TRANSMISSION
I HEREBY CERTIFY THAT THIS PAPER IS BEING FACSIMI-
LE TRANSMITTED TO THE PATENT AND TRADEMARK OFFICE
ON THE DATE SHOWN BELOW

Melissa Satone
TYPE OR PRINT NAME OF PERSON SIGNING CERTIFICATION

Melissa Satone
SIGNATURE

4/5/07
DATE

511-213-8300
FACSIMILE NUMBER

04/06/2007 FHETEK11 00000043 7153340

01 FC:1811

100.00 OP

PTO/SB/44 (04-05)

Approved for use through 04/30/2007. OMB 0851-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

(Also Form PTO-1050)

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,153,340

APPLICATION NO.: 10/747,655

ISSUE DATE : December 26, 2006

INVENTOR(S) : Byong Kee KIM; Seong Hyeon HONG; Yong Won WOO

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Cover page, Item (75) Inventors:

Please amend the Inventor as follows from "Byong Kee KIM" to
--Byoung Kee KIM--.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Melissa Sagorresc/o LOWE, HAUPTMAN, & BERNER LLP
1700 Diagonal Road, Suite 300
Alexandria, VA 22314

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1460, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

BEST AVAILABLE COPY

(12) United States Patent
Kim et al.**(10) Patent No.: US 7,153,340 B2**
(45) Date of Patent: *Dec. 26, 2006**(54) PROCESS FOR MANUFACTURING
NANO-PHASE TaC-TRANSITION METAL
BASED COMPLEX POWDER****(75) Inventors:** ~~Byong~~ ^{Byoung} ~~Kee~~ Kim, Dongre-Ku (KR);
Seong Hyeon Hong, Changwon-shi
(KR); Yong Won Woo, Seongnam-shi
(KR)**(73) Assignee:** Korean Institute of Machinery and
Materials, Taejon (KR)**(*) Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.This patent is subject to a terminal dis-
claimer.**(21) Appl. No.: 10/747,655****(22) Filed: Dec. 30, 2003****(65) Prior Publication Data**

US 2004/0223865 A1 Nov. 11, 2004

(30) Foreign Application Priority Data

May 7, 2003 (KR) 10-2003-0028766

(51) Int. Cl.
C01B 31/30 (2006.01)
C22C 29/06 (2006.01)**(52) U.S. Cl.** 75/351; 75/369; 423/440**(58) Field of Classification Search** 75/351,
75/369; 423/440

See application file for complete search history.

(56) References Cited**U.S. PATENT DOCUMENTS**

1,928,453 A *	9/1933	Kelley	75/239
2,491,410 A *	12/1949	Laughlin et al.	501/87
3,379,647 A *	4/1968	Smudski	252/640
3,488,291 A *	1/1970	Hardy et al.	252/642
3,914,113 A *	10/1975	Chiu	428/539.5
4,008,090 A *	2/1977	Miyake et al.	501/91
5,352,269 A *	10/1994	McCandlish et al.	75/351
6,214,309 B1 *	4/2001	Shaw et al.	423/345
6,293,989 B1 *	9/2001	Kim et al.	75/351
6,511,551 B1 *	1/2003	Kim et al.	148/237
6,793,875 B1 *	9/2004	Shaw et al.	419/18
2002/0043130 A1 *	4/2002	Kim et al.	75/236

* cited by examiner

Primary Examiner—Ngoclan T. Mai*(74) Attorney, Agent, or Firm*—Lowe, Hauptman, & Berner
LLP**(57) ABSTRACT**

Ultra fine TaC-transition metal based complex powder is prepared by: dispersing a mixture of a Ta-containing material and a transition metal-containing water soluble salt into a solvent; stirring the mixture and spray-drying the stirred material to obtain precursor powder; calcining the precursor powder to form ultra fine Ta-transition metal complex oxide powder; mixing the ultra fine Ta-transition metal complex oxide powder with nano-sized carbon particles, followed by drying to obtain complex oxide powder; and subjecting the dried complex oxide powder to reduction/carburization in a non-oxidizing atmosphere.

12 Claims, 2 Drawing Sheets